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**Descriptive** Findings

# Children Facing Economic Hardships in the United States: Differentials and Changes in the 1990s

Hsien-Hen Lu Julian Palmer Younghwan Song Mary Clare Lennon J. Lawrence Aber

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Descriptive Findings

### Children Facing Economic Hardships in the United States: Differentials and Changes in the 1990s

Hsien-Hen Lu<sup>1</sup> Julian Palmer<sup>2</sup> Younghwan Song<sup>3</sup> Mary Clare Lennon<sup>4</sup> J. Lawrence Aber<sup>5</sup>

#### Abstract

This paper helps document significant improvements in the child low-income rate as well as the significant decrease in the proportion of children who relied on public assistance in the United States during the 1990s. Many disadvantaged groups of children were less likely to live in poor or low-income families in the late 1990s than such children a decade earlier. The improvement in the child low-income rates of these disadvantaged groups was accompanied by a substantial increase in parental employment. However, parental employment appears to do less to protect children from economic hardship than it did a decade earlier. This paper shows that working families' children in many disadvantaged social groups, especially groups in medium risk ranks—children in families with parents between ages 25 to 29, with parents who only

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had a high-school diploma, and in father-only families—suffered the largest increase in economic hardship. Our results indicate that the increased odds of falling below low-income lines among children in working families facing multiple disadvantaged characteristics and the increased proportion of these children in various subgroups of working families in the 1990s can help explain the increased economic hardship among subgroups in the medium risk ranks listed above. Finally, the paper also notes that the official measure of poverty tends to underestimate low-income rates.

#### **1. Introduction**

It is well documented that children in the United States face a substantial chance of experiencing economic hardship, compared to children in most other developed countries (Rainwater and Smeeding 2003). Almost two in five children in America live in low-income families. This paper uses annual income data from the U.S. Census Bureau for 1975 through 2001 to answer several basic questions concerning American children in low-income families. How many children in low-income families are there? Who are they? How have the numbers, rates, and characteristics of America's children in low-income families changed during the past decade? Who have become better off and who worse off?

Recent research suggests that many families with incomes up to twice the official U.S. poverty line (\$18,660 for a two-parent family with two children under 18, according to the guideline of 2003) are likely to face economic hardships and have difficulties meeting their basic material needs (Note 1). For example, by considering real minimum living costs and the widely used definition of being poor (i.e., spending two-thirds of family income on basic food and housing), Boushey et al. (2001) found that the amount of income needed to ensure economic sufficiency is consistently around 200 percent of the official poverty line. (Cf., Johnson, Rogers, and Tan, 2001, Note 2). In addition, developmental research shows that low-income status, even for children in a family with incomes above the official poverty line, has negative effects on children's healthy growth and development (Gershoff, Aber, and Raver 2003; Duncan and Brooks-Gunn 2000; Blau, 1999; Duncan et al. 1998; Smith et al. 1997; Hanson et al. 1997, Note 3). The current study, therefore, focuses on children who may or may not be officially poor but are nevertheless in families that are struggling to make ends meet.

This paper features extensive analyses of low-income children and families with incomes up to 200 percent of the poverty line. It also disaggregates children in "poor" families below poverty line and those in near-poor families with incomes between 100 and 200 percent of the poverty line (Note 4). In doing so, this paper documents that a growing share of America's children in low-income families are now in near-poor families (those with incomes above the poverty line but below 200 percent of the poverty line). The majority of these near-poor families are working families still struggling to meet their basic needs but at the same time facing reduced benefits and increased taxes (Note 5). It is a welcome fact that the growing share of near-poor families is at least partially a result of increased parental employment and a declining official poverty rates during the late 1990s. However, this paper also reveals how the progress of the 1990s has stalled and left many important new challenges for those who seek to improve the material well-being of children and families in the United States.

#### 1.1 Previous studies and research questions

Several studies have examined the economic conditions facing low-income families during the 1990s. We build on these studies and expand our understanding of patterns and trends affecting American children in low-income families. The Kids Count 2003 Data Book (Annie E. Casey Foundation 2003) is one of the most up-to-date documents that cover the distribution of low-income children by geographical area. However, detailed information for the parental and family characteristics of children in lowincome families is not explored in the Kids Count 2003 Data Book. Moreover, the Kids Count 2003 Data Book paid little attention to trends. By using older data sources, Shirk et al. (1999) and Annie E. Casey Foundation (2002) covered trends in child low-income rates by geographical areas over time. Nevertheless, like Kids Count 2003 Data Book, they only focused on the overall levels and geographical variation in child low-income distributions and not differentials among subgroups in low-income rates and their changes. One in Four (NCCP, 1996) was the only study that covered some of the differentials that we will explore below, however, it did not document trends over time in social differentials of children in low-income families. More importantly, the data used by the One in Four (1996) study are currently nearly ten years old and they were collected before the implementation of the federal welfare reform legislation of 1996, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA). The current study helps update NCCP (1996) in order to document changes after the implementation of PRWORA. In recent research, Acs et al. (2000) point out that a substantial proportion of working people in the late 1990s still faced material hardships. The current study will further explore the characteristics of children in working families facing material hardships over the past decade.

Following this line of research, the current paper helps address several issues which have not yet been satisfactorily analyzed by previous studies. First, we help document up-to-date levels and long-term trends in child low-income rates in the United States; especially, the trends for children in working families. Second, in addition to the overall trends, this paper explores differentials in child low-income rates in the United States by social groups and their changes in the 1990s. By delving into changes by social groups, this paper helps distinguish changes in the chances of facing economic hardships among children due to compositions and those due to differences in the odds of facing economic hardships of each social group over time. Third, this paper examines the limitations of the official measure of family income in measuring low-income.

This paper emphasizes changes in the low-income rates and the numbers of children in low-income families over the past decade and helps put these changes in a long-term demographic context by going back to the mid-1970s. In the 1990s, many

major policy changes affected the economic well-being and safety net of children in low-income families. The major changes included federal and state welfare legislation. particularly the PROWRA of 1996, the expansion of the federal Earned Income Tax Credit (EITC) in 1993, and the introduction of the State Child Health Insurance Program (SCHIP) in 1997. Previous studies documented the impacts of these new policies implemented in the 1990s (e.g., Lichter and Crowley forthcoming; Blank and Shoeni 2003; Blank 2003, 2002, Bennett; Lu, and Song 2002; Dick et al. 2002; Dubay and Kenney 2002; Lichter and Jayakody 2002; Mitchell and Osber 2002; Smith and Rousseau 2002; Shenkman et al. 2002; Weil and Finegold 2002; Blank and Haskins 2001; Bennett and Lu 2001; Johnson 2001; Riley 2001; Meyer and Rosenbaum 2000; Ellwood 2000, Note 6). However, except for a few studies (e.g., Lichter and Crowley forthcoming; Blank and Shoeni 2003; Bennett, Lu, and Song 2002), relatively little attention has been paid to impacts of recent policy changes on the economic well-being of children, and none of the studies exploring the impact of recent policy changes documented children in low-income families in any detail. While this paper does not attempt to evaluate the full impact of these major policy changes, the following analyses help document by parental and family characteristics the chances for children to live in low-income families before and after these changes.

In analyzing trends in low-income rates, this study emphasizes how these trends differ for various income levels (near poverty, poverty, and extreme poverty) and social groups, defined by parental employment, education, age, living arrangement, and race/ethnicity. We select the subgroups by following findings of previous studies on child poverty and assume that factors important in predicting child poverty are also important in predicting the probability of children living in low-income families (Cf., Lichter and Crowley 2002; Danziger and Haveman 2001; Lichter 1997; NCCP 1996). The key question to be asked, therefore, is not whether these are important factors for child economic well-being. Instead, the current study is interested in the level of low-income rate by subgroup, the disparities among these subgroups and the changes in these levels and differences over the past decade.

It has been well documented that recent welfare reform increased labor force participation (e.g., Lichter and Crowley forthcoming; Blank 2001; Weil and Rosenbaum 2000), but none of the currently available studies has provided information on whether the economic security of working families given the same family background has remained the same over the past decade. It is very likely that the increase in labor supply due to welfare reform could result in a lower wage rate for families competing in the same market. This study can help document who might have suffered from such a competition.

This paper also uses alternate income and poverty definitions to develop a more nuanced picture of how public policies and work-related expenses affect low-income families' material well-being. While there is no officially accepted alternative measure of poverty, this paper uses an experimental income measure proposed in a report by the National Academy of Sciences (Citro and Michael 1993) and implemented by the Census Bureau of the United States. This makes it possible to examine the impact of a variety of public programs and policies, (e.g., earned income tax credits, housing assistance, health insurance, child care subsidies, and food stamps) as well as taxes and various expenses that are omitted from the official measure but are crucial to children in low-income families (Note 7). Previous studies found that the official and experimental income measures produced similar levels and trends in poverty rates (Proctor and Dalaker 2003, 2001: Dalaker 2001: Short 2001: Short et al. 1999: Citro and Michael 1993). However, the difference between these two measures becomes clearer when we assess levels and trends in near poverty rates and see the impact on near poor families of taxes and work related expenses that are not included in the official measure. This study will examine the differences among children in extremely poor, poor, and nearpoor families (i.e., families between 100 and 200 percent of the official poverty line) that have not yet been documented by studies comparing the official and the experimental measures of family income (Cf., Iceland 2003a, 2003b; Iceland and Kim, 2001; Iceland et al. 2001).

#### 1.2 Data, method, and research design

The analyses in this paper are based on data collected by the U.S. Bureau of the Census for its annual March supplements to the Current Population Survey (CPS) from 1976 to 2002 (Note 8). In each of these survey years, individuals from more than 50,000 households were interviewed to obtain detailed information on family income sources for the previous calendar year, as well as employment status, education, and other important data used in this paper (Note 9). The March CPS data have been used by the Census Bureau to provide yearly estimates on poverty in the United States since the 1960s (Note 10). These decades of data enable us to put the poverty trends documented in this paper in a long-term context.

The family income estimates and poverty thresholds used in this paper strictly follow the official definitions of the U.S. Census Bureau (Note 11). To better understand the economic conditions facing low-income families, however, we also produced analyses of family income based on an experimental measure of poverty recently developed by the Census Bureau. Our analyses and those of the U.S. Census Bureau confirm that the use of either the official or the experimental measure will not produce very different estimates of poverty (Note 12). However, we find that the official measure tends to underestimate the low-income rate (the percentage of children in families with incomes below 200 percent of the poverty line) in contrast to the low-

income rate estimated by using the experimental measure. While no new measure of poverty and income has been officially accepted, our findings indicate that the low-income rates in the paper are conservative estimates of the actual levels of economic hardship facing American families.

In order to document changes in economic conditions for children in low-income families before and after the major policy changes and economic expansion of the 1990s, this paper compares the average poverty and low-income rates in 1987-1991 with those in 1997-2001 across a wide range of variables, including parental employment status, age, education, living arrangement, and race/ethnicity (Note 13). For all the risk factors that we can compare between the two time periods, 1987-1991, and 1997-2001, we explore the detailed changes in low-income and poverty rates by parental employment statuses and by the subgroups of each risk factor affecting families. Appendix A shows how we define the subgroups that are used in our analyses. By using these three-way tables defined by time period, risk factor, and parental employment, we estimate how much parental employment for each subgroup has changed, and, moreover, given the parental employment status, how the chances for children to live in a poor or low-income family have changed in the last decade.

In these analyses, we combine years of data in our comparison to provide more statistically robust estimates for both periods. Bootstrap standard errors are estimated for each period and then used to test for whether the estimates in 1987-1991 are statistically different from the actual poverty and low-income levels in 1997-2001 (Efron and Tibshirani, 1993). However, due to the fact that the March CPS keeps about a half of the same sample for adjacent years, we only use data from three of the five years referred to in each period (1987, 1989, and 1991, for 1987-1991, and 1997, 1999, and 2001, for 1997-2001) to avoid overlapping samples in our final analyses.

While the non-parametric exploration with bootstrap standard errors will be used as the main tool of our following analyses, a logit model will also be used to examine changes in the net effects of parental and family background on child economic hardship between the two time periods. In the logit model, we use robust standard errors to account for the fact that siblings share their parental and family characteristics (Long and Freese, 2003).

#### 2. A demographic portrait of children in low-income families

The number of children in low-income families declined from 1993 to 2000 and is now about the same as in 1990. In 1993, more children (31 million) lived in low-income families (i.e., in families with incomes under 200 percent of the poverty line) than in any other year between 1975 and 2001. After 1993 that number steadily declined so

that, by 2000, about 27 million children lived in low-income families, the lowest number since 1990. This period of decreasing numbers of children in low-income families parallels the national economic expansion of the U.S. between 1993 and 2000. However, our analysis of income data suggests that the steady decline in the number of children in low-income families has stalled.



*Figure 1:* Number and Percentage Distribution of Children by Ratio of Family Income to the Poverty Line (PL), 2001.

Nearly, two of every five children live in low-income families. Among the 70 million children under age 18 in 2001, 38 percent lived in low-income families. More than one in five children (more than 15 million) lived at the edge of poverty (between 100 to 200 percent of official poverty line), while almost 12 million children lived below the poverty line. About 5 million children were in extreme poverty, defined as under half of the poverty line, or less than \$9,000 for a two-parent family of four (see Figure 1).

Figure 2 shows time trends in the percentage of children living in low-income, poor and extremely poor families. In 2001 children were less likely to live in low-income families than they were in 1991 (38 percent compared to 44 percent). The low-

income rate in 2000 (37 percent) was the lowest point in the last 26 years, but the improvements in the low-income rate from 1993 to 2000 did not continue in 2001.



Figure 2: Percentage of Children in Extremely Poor, Poor, and Low-income Families

In 2001 more children of low-income families lived in near-poor families than any year since 1980. Figure 3 shows time trends in the composition of the population of children in low-income families between 1975 and 2001. It reveals that, for decades, most children in low-income families have been near poor, (i.e., in families with incomes between 100 and 200 percent of the poverty line). In recent years, children in low-income families with incomes under 200 percent of the poverty line) became more likely to live in near-poor families. By 2001 a larger proportion (58 percent) of children in low-income families lived in near-poor families than in any year since 1980.

From the mid-1970s to the mid-1990s the proportion of all children in low-income families between 100 and 200 percent of the poverty line decreased from 60 percent to 50 percent. From 1995 to 2001, this proportion rebounded to 58 percent, a 16 percent increase from its low point. The rebound occurred in part because the near-poverty rate (i.e., the percentage of children in families with incomes between 100 and 200 percent of the poverty line) did not improve as quickly as the child poverty rate.

The proportion of children in low-income families who live in extremely poor families, (i.e., in families under 50 percent of the poverty line) has remained around 20 percent since the mid-1980s. This proportion doubled between the mid-1970s and mid-1980s. Despite recent decreases, the proportion of children in extreme poverty among all children in low-income families is still well above its pre-1980 level (see Figure 3, Note 14).



Figure 3: Composition of the Population of Children in Low-Income Families, 1975-2001

It is a welcome fact that the growing share of near-poor families is at least partially a result of the improved employment and declining official poverty rates during the late 1990s. However, our analyses below also reveal how the progress of the 1990s has left new challenges for those who seek to improve the material well-being of children and families in the United States.

Children of all age groups became less likely to live in low-income families between 1991 and 2001. However, throughout this time period, younger children continued to be more economically disadvantaged than older children. Children under age 6 were more likely to be poor or extremely poor than children between ages 6 and 18 (see Figure 4, Note 15).

While younger and older children have similar chances of living in near-poor families (21 percent and 23 percent in 2001, respectively), children under age 6 were 15 percent more likely to live in low-income families than older children (42 percent vs. 36 percent in 2000, see Figure 5). This shows that differences below the poverty line are responsible for the greater share of younger children living in low-income families compared to older children. An analysis of 2001 income data indicates that the economic downturn that year had more impact on younger and poorer children than it did on other children (Note 16).



*Figure 4:* Poverty and Extreme-Poverty Rates by Age Group, 1975-2001



*Figure 5:* Low-Income and Near-Poverty Rates by age group, 1975-2001

## 3. Parental employment

More children of low-income families are living in full-time working families than were a decade earlier. The proportion of children in low-income families with at least one working parent increased from 76 percent in 1991 to 85 percent in 2001. The corresponding proportion with at least one parent working full-time increased substantially (from 45 percent in 1991 to 57 percent in 2001) during the unprecedented economic boom of the 1990s. The increase in the full-time working family rate accounted for the increase in the number of working low-income families. The percentage of children who were in low-income families and had at least one parent employed part time remained around 30 percent throughout the decade (see Figure 6, Note 17).



Rate (%)

*Figure 6:* Percentage of Children with Parents of Various Employment Statuses among all Children in Low-Income Families, 1975-2001

Unfortunately, the economic security of children in working families in 1997-2001 has not improved compared with that in 1987-1991. The low-income rate for children whose parent worked full-time and year-round in 1997-2001 was 27 percent, similar to the 26 percent rate in 1987-1991.

In 2001, more children of low-income families lived in working families relying on earnings (Note 18) than any year since 1975. The percentage of children in low-

income families with earnings from employment but not receiving any public assistance (Note 19) increased to 81 percent in 2001 from 65 percent in 1993, which was the lowest point since 1975. When working families receiving both earnings and public assistance are included, the percentage of children in low-income families with earnings increased to 88 percent in 2001 from 79 percent in 1993, which was also the lowest level since 1975. Only a small fraction (4 percent) of children lived in low-income families that relied on public assistance but no earned income in 2001, compared to 15 percent in 1993, which was the highest level since 1975 (see Figure 7).



*Figure 7:* Percentage Distribution of Children in Low-Income Families by Sources of Family Income

The trends for poor children have changed over time with a pattern very similar to children in low-income families. The strong economy of the 1990s and the work requirements of federal and state welfare reforms contributed to the steep rise in low-income parents – particularly unmarried mothers – participating in the workforce.

While the percentage of children of low-income families living in working families increased across the board regardless of living arrangement, the most significant change was among these children in unmarried-mother families. The percentage of children in low-income families that were unmarried-mother families relying on earnings from employment and not receiving any public assistance increased to 68 percent in 2001 from 40 percent in 1991. The percentage of children in low-income families relying on public assistance and without any earned income decreased to 7 percent in 2001 from 31 percent in 1991.

The increase in parental employment among low-income families has been accompanied by a weakened safety net for families without earnings (Note 20). The proportion of children in low-income families with neither family income from earnings nor from public assistance increased dramatically during the 1990s. Among children in poverty in 1991 only about 8 percent were in families without either earnings or public assistance. By 2001, the percentage of poor children in this category had more than doubled to reach 18 percent, the highest level since 1975. The proportion of children in low-income families (under 200 percent of the poverty line), without earnings or public assistance in 2001 (9 percent) was also almost twice as high as the proportion in 1991 (5 percent). The increase in the proportion of poor children in unmarried-mother households without earnings or public assistance is even more notable. The proportion of children in this category increased two and a half times from 9 percent in 1991 to 23 percent in 2001 (see Figure 8).



*Figure 8:* Proportion of Children in Families without Earnings and Public Assistance among Children in Low-Income and Poor Families, Unmarried-mother vs. All Families, 1975-2001

#### 4. Parental education

Parental education strongly predicts the earning ability of parents and largely determines the economic security of their children. Based on the average for 1997 to 2001, 40 percent of children lived with parents without any college education. Among children whose better-educated parent did not finish high school, more than 80 percent lived in low-income families (under 200 percent of the poverty line). Half of these children lived under the poverty line. Among children whose more-educated parent was a high school graduate, more than one half (53 percent) were low-income. About a third of the children whose more-educated parent was a high school graduate lived in near-poor families (between 100-200 percent of the poverty line). Children whose more-educated parent was a high school graduate were much less likely to be poor or extremely poor than children whose parents did not finish high school. However, about one in five children whose more-educated parent had at least some college education lived in low-income families and the near-poverty rate for these children was about 16 percent (see Table 1-1).

Children whose more-educated parents did not attend college have become more likely to live in near-poor families (with incomes between 100-200 percent of the poverty line) in recent years than children in that category a decade ago. The chance of being in a near-poor family for children whose more-educated parent did not have a high school diploma increased by 23 percent (from 26 percent in 1987-1991 to 32 percent in 1997-2001), although they become only slightly less likely to be under 200 percent of the poverty line than a decade ago (84 percent in 1987-1991 compared to 83 percent in 1997-2001). At the same time, the chances of living in a poor, near-poor, or low-income family among children with parents who completed high school but did not attend college have all increased for 5 percent (see Tables 1-1 and 1-2).

The majority of children in low-income families have at least one working parent, regardless of their parents' education level, and for most of these children, at least one parent works full-time. In 1997-2001, 78 percent of children in low-income families that did not have any parent with a high school diploma lived with at least one employed parent. About two-thirds of these working parents had full-time jobs. Ninety-one percent of children with at least one parent who completed high school were in working families and 97 percent of children with at least one parent who went to college were in working families (see Table 1-1).

 

 Table 1-1:
 Distribution of Parental Education and Employment Status among All Children, Child Poverty and Near-Poverty Rates by Parental Education and Employment Status, and Their Changes, 1997-2001 vs. 1987-1991

			All children			Povert	y rate		Ň	ar-pover	iy rate
Parental education and employment status	Percel	ntage ution	% change	Num (in mil	ber ions)	~	. 0	% change	%		% change
	(1)	(2)	(2)-(1)/(1)*100			(3)	(4)	(4)-(3)/(3)*100	(2)	(9)	(6)-(5)/(5)*100
	1987- 1991	1997- 2001		1987- 1991	1997- 2001	1987- 1991	1997- 2001		1987- 1991	1997- 2001	
Less than HS	100%	100%		9.4	8.7	57.4%	50.4%	-12.2%**	26.3%	32.4%	23.4%**
At least one parent worked full-time, year-round	37.3%	49.6%	32.9%**	3.5	4.3	24.1%	27.5%	13.8%**	43.1%	45.2%	5.0%
Parents worked part-time	27.1%	28.2%	3.9%	2.5	2.5	65.5%	66.5%	1.6%	24.2%	24.2%	-0.3%
No parent employed	35.6%	22.3%	-37.4%**	3.3	1.9	86.2%	81.1%	-6.0%**	10.2%	14.3%	40.8%**
HS graduate	100%	100%		20.9	18.7	22.4%	23.5%	5.0%*	28.3%	29.8%	5.3%**
At least one parent worked full-time, year-round	68.6%	71.4%	4.2%**	14.3	13.3	7.4%	10.1%	37.6%**	29.4%	31.2%	6.1%**
Parents worked part-time	21.2%	20.1%	-5.1%**	4.4	3.8	43.8%	49.7%	13.4%**	31.3%	30.2%	-3.5%
No parent employed	10.3%	8.5%	-17.6%**	2.1	1.6	78.7%	74.6%	-5.3%**	15.2%	17.7%	16.3%
Some college or more	100%	100%		32.5	41.8	7.5%	7.1%	-5.9%	15.3%	15.6%	1.4%
At least one parent worked full-time, year-round	83.9%	86.3%	2.9%**	27.3	36.1	2.3%	2.5%	9.3%	13.0%	13.8%	6.1%**
Parents worked part-time	12.5%	10.9%	-12.5%**	4.0	4.6	25.0%	28.9%	15.6%**	30.1%	28.1%	-6.7%**
No parent employed	3.6%	2.8%	-23.7%**	1.2	1.2	67.8%	62.7%	-7.6%**	17.9%	19.8%	10.7%
* p<.10 **p<.05, HS=High Sc	chool										

Table 1-2:	Distribution	and	Changes	in	Child	Low-Incom	e Rates	by	Parental
	Education an	d Em	ployment .	Stat	us, 199	7-2001 vs. 1	987-199	1 (N	ote 21)

	Low-i	ncome rate	
		%	% change (Note 22)
Parental education and employment status	(1)	(2)	(2)-(1)/(1)*100
	1987-1991	1997-2001	
Less than HS	83.7%	82.8%	-1.1%
At least one parent worked full-time, year-round	67.2%	72.7%	8.1%**
Parents worked part-time	89.7%	90.7%	1.1%
No parent employed	96.4%	95.4%	-1.0%
HS graduate	50.7%	53.3%	5.2%**
At least one parent worked full-time, year-round	36.7%	41.3%	12.4%**
Parents worked part-time	75.1%	79.9%	6.3%**
No parent employed	93.9%	92.3%	-1.8%*
Some college or more	22.9%	22.6%	-1.0%
At least one parent worked full-time, year-round	15.4%	16.4%	6.6%**
Parents worked part-time	55.2%	57.0%	3.4%
No parent employed	85.7%	82.5%	-3.8%**

\*p<.10, \*\*p<.05, HS=High School

Children whose parents did not finish high school were four times as likely to be in low-income families as children with one or more college educated parents. And children whose parents completed high school but did not attend college were more than twice as likely (53 percent vs. 23 percent) to be in low-income families than children with at least one college-educated parent.

In the last decade, there has been an increase in the labor force participation of less educated parents. For example, the largest increase (33 percent) in the proportion of full-time employment was among parents who did not have a high school diploma. Unfortunately, in the last decade, we also found a growing share of children in working families became low-income in all parental education levels. By comparing the years 1987-1991 and 1997-2001, we find a 12 percent increase in the low-income rate and a 38 percent increase in the poverty rate for children whose parents worked full-time and had a high-school diploma (but no college education). For children whose parents did not have a high school diploma but worked full-time year-round, we find an 8 percent

increase in the low-income rate, and the increase in the chance for children whose parents entered college to live in a low-income family was about 7 percent. There has been no noteworthy improvement in economic security among children whose parents worked part-time, either. The chances of living in a low-income family increased for children whose parents are working part-time and have only a high-school diploma. Children whose parents completed high school or entered college but worked part-time were also more likely to be poor in recent years than children with such parents a decade ago (see Tables 1-1 and 1-2).

#### 5. Parental age

It is well documented that earnings are heavily influenced by work experience and education, and, therefore, on average, parental earning abilities tend to be lower among younger parents than among older parents who have had more time to gain education and experience (Note 23). As a result, children with younger parents are more likely to be living at the edge of poverty. There are 22 million (one in three) children living with parents younger than age 35 among all children living with their parents (see Table 2-1).

About half of children living with parents between ages 30 to 34 are in low-income families. The majority of children living with parents younger than age 30 are in low-income families. For children whose parents are younger than age 25, the chances of living in a low-income family (under 200 percent of poverty line) are very high. More than three-quarters of these children with young parents are in low-income families, and almost half of these children with young parents live under the official poverty line (under 100 percent of poverty line, see Tables 2-1 and 2-2).

Between 1997 and 2001, the percentage of children living in low-income families was 76 percent when parents were younger than age 25, 61 percent for parents ages 25 to 29, 48 percent for parents ages 30 to 34, 37 percent for parents ages 35 to 39, and 26 percent for parents age 40 or older. A comparison of these rates with those from a decade ago shows that the improvement varied dramatically by parental age. For the youngest parental group (under age 25), the improvement occurred both among poor and low-income (under 200 percent of the poverty line) families. The highest decrease in low-income rates was found among children with parents age 40 or older (8 percent). Except for the children with parents age 40 or older, the near-poverty rates increased among all of the other parental age groups. The highest increase in the child near-poverty rate (between 100 to 200 percent of the poverty line) was found among children with parents' age younger than 30 (see Table 2-1).

Table 2-1:	Distribution of Parental Age and Employment Status among All Children,
	Child Poverty and Near-Poverty Rates by Parental Age and Employment
	Status, and Their Changes, 1997-2001 vs. 1987-1991

						1			:		
	ſ		All children	Nium		Pover	ty rate		Near	-poverty	rate
Parental age	distrib	ntage ution	% change	lim ni)	ions)	6	.0	% change	%		% change
and employment status	(1)	(2)	(2)-(1)/(1)*100			(3)	(4)	(4)-(3)/(3)*100	(2)	(9)	(6)-(5)/(5)*100
	1987-	1997-		1987-	1997-	1987-	1997-		1987-	1997-	
	1991	2001		1991	2001	1991	2001		1991	2001	
Age less than 25	100%	100%		3.3	3.3	51.6%	45.2%	-12.4%**	26.5%	31.0%	16.9%**
At least one parent worked											
full-time, year-round	29.4%	37.4%	27.0%**	1.0	1.2	15.3%	18.2%	18.5%	43.1%	46.2%	7.2%
Parents worked part-time	35.6%	41.3%	15.8%**	1.2	1.4	55.0%	56.3%	2.3%	25.9%	24.4%	-5.9%
No parent employed	34.9%	21.4%	-38.8%**	1.1	0.7	78.7%	71.2%	-9.5%**	13.1%	17.1%	30.3%**
Age 25-29	100%	100%		7.7	6.7	33.4%	30.1%	-9.8%**	27.0%	30.8%	14.0%**
At least one parent worked	/06 23	64.00	11 70/ **		c •	/00 0	11 00/	**/00 00	/00 10	/00/10	** /02 0
iuir-iiiie, yeai-iouiid	0/.5.10	04.0%	11.7%	4.4	5.4	0.3%	%Q.11	33.2%	31.8%	34.9%	9.1.9
Parents worked part-time	24.8%	25.5%	2.8%	1.9	1.7	51.4%	55.3%	7.5%*	29.1%	28.0%	-3.8%
No parent employed	17.9%	10.5%	-41.3%**	1.4	0.7	86.8%	80.7%	-7.0%**	9.0%	13.1%	45.7%**
Age 30-34	100%	100%		14.0	12.3	22.7%	22.1%	-3.0%	24.4%	25.5%	4.2%
At least one parent worked											
full-time, year-round	70.2%	75.4%	7.5%**	9.8	9.2	6.6%	9.3%	41.4%**	25.2%	26.3%	4.2%
Parents worked part-time	18.8%	17.4%	-7.0%**	2.6	2.1	45.2%	51.6%	14.3%**	31.1%	28.3%	-8.9%
No parent employed	11.0%	7.1%	-35.5%**	1.5	0.9	87.5%	85.2%	-2.7%	8.2%	9.6%	18.1%
Age 35-39	100%	100%		15.9	16.6	15.7%	15.4%	-1.4%	20.7%	21.8%	5.5%*
At least one parent worked full-time. vear-round	78.1%	81.5%	4.4%**	12.4	13.5	5.1%	6.6%	28.6%**	19.7%	21.2%	7,1%**
Parents worked part-time	15.1%	13.4%	-11.5%**	2.4	2.2	39.4%	44.1%	11.7%**	29.5%	29.0%	-1.7%
No social amongo	/00 0	E 40/	** 707 90		Ċ	/07 00	04 40/		01.01	10 70/	/02 01
ivo parent employed	0.8%	%1.C	%0°C7-		0.8	83.4%	81.4%	-2.3%	12.1%	13.7%	13.1%
Age 40+	100%	100%		21.9	30.3	11.8%	9.7%	-18.0%**	17.0%	16.7%	-1.6%
At least one parent worked	70 8%	84.0%	۲ 3%**	17 F	25.4	4 1%	2 B%	,е 8%	14 5%	14 7%	16%
	2000	20.10	2000	2	5	R F	0.00	200	201		202
Parents worked part-time	13.3%	11.0%	-17.7%**	2.9	3.3	29.6%	30.5%	3.0%	28.8%	28.4%	-1.2%
No parent employed	6.9%	5.1%	-26.7%**	1.5	1.5	67.2%	62.7%	-6.6%**	22.9%	24.2%	5.8%
* p<.10 **p<.05											

Table 2-2:	Distribution and Changes in Child Low-Income Rates by Parental Age
	and Employment Status, 1997-2001 vs. 1987-1991

	Low-	income rate	
	%		% change
Parental age and employment status	(1)	(2)	(2)-(1)/(1)*100
	1987-1991	1997-2001	
Age less than 25	78.1%	76.2%	-2.4%*
At least one parent worked full-time, year-round	58.4%	64.4%	10.2%**
Parents worked part-time	80.9%	80.6%	-0.4%
No parent employed	91.8%	88.3%	-3.8%**
Age 25-29	60.4%	60.9%	0.9%
At least one parent worked full-time, year-round	40.7%	46.7%	14.8%**
Parents worked part-time	80.5%	83.2%	3.4%**
No parent employed	95.8%	93.8%	-2.1%*
Age 30-34	47.2%	47.5%	0.7%
At least one parent worked full-time, year-round	31.8%	35.6%	11.9%**
Parents worked part-time	76.3%	79.9%	4.8%**
No parent employed	95.7%	94.8%	-0.9%
Age 35-39	36.4%	37.3%	2.5%
full-time, year-round	24.9%	27.8%	11.6%**
Parents worked part-time	68.9%	73.0%	6.0%**
No parent employed	95.4%	95.1%	-0.3%
Age 40+	28.8%	26.4%	-8.3%**
full-time, year-round	18.5%	18.5%	-0.3%
Parents worked part-time	58.4%	59.0%	0.9%
No parent employed	90.1%	87.0%	-3.5%**

\*p<.10, \*\*p<.05

Between 1997 and 2001, 74 percent of children born to teenage parents lived in low-income families. Two-thirds of these were in poverty. A comparison between children born to teenage parents during 1997-2001 and those born a decade earlier finds such children were less likely to live in low-income or poor families but more likely to be near-poor (Note 24). The decreases in child poverty from 1987-1991 to 1997-2001 by parental age were largely related to an increase in parental employment. The increase was larger for younger parents. For the youngest parental group (ages less than 25), the increase in full-time employment was 27 percent and in part-time employment was 16 percent. This high rate of increase in parental employment among younger parents was due in part to the relatively high proportion of families without any working parents among children living with young parents during the 1987-1991 period. For example, the proportion of children whose older parent was younger than age 25 and who did not have a working parent declined by more than a third from 35 percent to 21 percent. The proportion of children without a working parent decreased dramatically for all parental age groups while greater reductions were found among children living with parents younger than age 35. However, the decreases in child poverty during the same period were not related to the improving economic security of employed parents. On the contrary, age-specific low-income, poverty and near-poverty rates increased, between 1987-1991 and 1997-2001 for all parental age groups with full-time and year-round working parents, except for parents older than age 40 (most of these increases being statistically significant). However, instead of the children with teenage working parents, children in working families suffered the most were children whose parents were 25-29 (see Tables 2-1 and 2-2).

#### 6. Living arrangements

More than half of the children born in the 1990s will spend some part of their childhood living in an unmarried-parent family (Bumpass and Lu, 2000). In 1997-2001, among all children who lived with parents, about 30 percent of them lived in an unmarried-parent family and the large majority of these children lived with unmarried mothers (see Table 3-1).

Children living in unmarried-parent families have substantially higher low-income rates than other groups, in part, because two-parent families have more adults to help secure family economic resources. During 1997-2001, 71 percent of children who lived with unmarried mothers were in low-income families. Compared to the rate of children who lived with married parents (27 percent), it is more than twice (2.6 times) as high. Children who lived with unmarried fathers were also far more likely to be in low-income families (46 percent) than were those who lived with married parents. The difference in poverty between children living with an unmarried parent and children living with two parents is even greater, with five times as many children of unmarried mothers living in poverty as children in two-parent families (see Table 3-1, Note 25).

From 1987-1991 to 1997-2001, the chances of being in a low-income family for children living with two parents decreased from 30 to 27 percent. Children who lived with unmarried mothers became more likely to live in near-poor families (increasing from 24 to 29 percent), although they also became less likely to reside in low-income families. During the same period, the low-income rate for children who lived with unmarried fathers did not improve as much as that observed among children in other living arrangements (see Table 3-1).

Over the past decade, parental employment increased in all the family types covered in this paper, with the largest increase among unmarried-mother families. The proportion of children living with unmarried mothers without an employed parent has decreased from 36 percent in 1987-1991 to 22 percent in 1997-2001, the largest absolute percentage change among all family types. However, this increase in parental employment has not been accompanied by any improvement in the chances of escaping poverty or low-income status among unmarried-parent working families. The chance of being in a low-income family among children living with an unmarried parent who worked full time and year-round has significantly increased. The rise in the chances of being poor is especially notable among children in unmarried-mother (14 percent) and in unmarried-father (39 percent) families. The only significant improvements in the chances of being low-income given parental employment status are found among two-parent full-time working families and children in unemployed unmarried-mother families (see Tables 3-1 and 3-2).

Table 3-1:	Distribution of Living Arrangement and Parental Employment Status
	among All Children, Child Poverty and Near-Poverty Rates by Living
	Arrangement and Parental Employment Status, and Their Changes,
	1997-2001 vs. 1987-1991

			All children			Povert	y rate		Near	-poverty	r rate	
Living arrangement and parental	Perce	entage bution	% change	Num (in mill	iber lions)	%		% change	%		% change	
employment status	(1)	(2)	(2)-(1)/(1)*100			(3)	(4)	(4)-(3)/(3)*100	(5)	(9)	(6)-(5)/(5)*100	
	1987- 1991	1997- 2001		1987- 1991	1997- 2001	1987- 1991	1997- 2001		1987- 1991	1997- 2001		
Married Two-Parent Families	100%	100%		46.4	49.4	10.1%	8.4%	-16.3%**	20.4%	18.8%	-7.8%**	1
At least one parent worked full-time, year-round	84.0%	89.0%	6.0%**	39.0	44.0	4.7%	4.9%	3.8%	18.5%	17.5%	-5.5%**	
Parents worked part-time	13.3%	9.4%	-29.2%**	6.2	4.7	32.6%	32.4%	-0.4%	31.7%	30.8%	-2.8%	
No parent employed	2.7%	1.5%	-42.4%**	1.2	0.8	68.3%	69.1%	1.1%	22.6%	20.0%	-11.4%	
Unmarried-Mother Families	100%	100%		14.4	16.5	51.8%	42.1%	-18.8%**	23.6%	28.5%	21.0%**	
At least one parent worked full-time, year-round	33.5%	45.4%	35.5%**	4.8	7.5	13.3%	15.2%	14.4%**	35.5%	37.2%	4.7%	
Parents worked part-time	30.3%	32.8%	8.2%**	4.3	5.4	55.5%	56.2%	1.2%	25.9%	25.2%	-2.6%	
No parent employed	36.2%	21.8%	-39.7%**	5.2	3.6	84.3%	76.6%	-9.1%**	10.6%	15.4%	46.2%**	
Unmarried-Father Families	100%	100%		2.0	3.2	20.4%	19.1%	-6.2%	25.7%	27.3%	6.2%	
At least one parent worked full-time, year-round	64.0%	69.3%	8.4%**	1.3	2.2	5.7%	7.9%	39.4%**	25.9%	26.9%	3.9%	
Parents worked part-time	24.3%	21.1%	-13.2%**	0.5	0.7	39.2%	37.4%	-4.7%	27.3%	29.5%	8.1%	
No parent employed	11.7%	9.6%	-18.4%**	0.2	0.3	61.6%	60.1%	-2.3%	21.2%	25.3%	19.3%	
* p<.10 **p<.05												

#### Table 3-2: Distribution and Changes in Low-Income Rates by Living Arrangement and Parental Employment Status, 1997-2001 vs. 1987-1991

	Low-i	ncome rate	
	%		% change
Living arrangement and parental employment status	(1)	(2)	(2)-(1)/(1)*100
	1987-1991	1997-2001	
Married two-parent families	30.5%	27.3%	-10.6%**
At least one parent worked full-time, year-round	23.2%	22.4%	-3.6%*
Parents worked part-time	64.3%	63.3%	-1.6%
No parent employed	90.9%	89.1%	-2.0%
Unmarried-mother families	75.4%	70.6%	-6.4%**
At least one parent worked full-time, year-round	48.8%	52.4%	7.3%**
Parents worked part-time	81.4%	81.4%	0.0%
No parent employed	94.9%	92.1%	-3.0%**
Unmarried-father families	46.1%	46.4%	0.8%
At least one parent worked full-time, year-round	31.5%	34.8%	10.3%*
Parents worked part-time	66.5%	66.9%	0.5%
No parent employed	82.8%	85.4%	3.2%

\*p<.10, \*\*p<.05

#### 7. Racial and ethnic composition

Minority children are disproportionately likely to be in low-income families, while more children in low-income families are white than black or Hispanic. Over a third (36 percent) of the 70 million children in the United States during 1997-2001 were minorities—black, Hispanic, Native American, Asian American, or from other non-white racial and ethnic backgrounds. These children represent more than a half (56 percent) of all children in low-income families, and nearly two-thirds (65 percent) of children in poverty. Forty-four percent of children in low-income families were white (about 12 million), 27 percent were Hispanic (about 8 million), and 24 percent were black (about 7 million). Most near-poor children are white (8 million or 51 percent of those with family incomes between 100 and 200 percent of the poverty line, Note 26). The 5 million white children in poverty are still the plurality of poor children (35 percent), followed by the black and Hispanic poor children (about 4 million each, see Table 4-1).

The likelihood of living in low-income families varies widely across racial and ethnic groups. Between 1997 and 2001, 60 percent of black and 65 percent of Hispanic children lived in low-income families. In contrast, white children were less than half as likely to live in low-income families (see Table 4-1). In the late 1990s, among Hispanic children, Cuban children had the lowest chance (46 percent) of living in low-income families, as compared to more than half of the children of other Hispanic origins. Central and South American children had the second lowest chance of living in low-income families (57 percent). Mexican and Puerto Rican children had the highest chance of living in low-income families for Puerto Rican children was not higher than those of the Mexican children, Puerto Rican children were most likely to live in poverty (40 percent) among all Hispanic children.

From the late 1980s to the late 1990s, children of all racial and ethnic groups became less likely to live in low-income families. Black children experienced the largest gains in reducing their poverty and extreme poverty rates. However, both black and Hispanic children became more likely to live in near-poor families, between 100 and 200 percent of poverty line (see Table 4-1). Among Hispanic children, Puerto Ricans (26 percent) and Cubans (14 percent) experienced a greater increase in near-poverty rate than other Hispanic children, while Puerto Rican children also experienced the largest decrease in low-income and poverty rates (-12.6 percent).

Table 4-1:	Distribution of Race/Ethnicity and Parental Employment Status among
	All Children, Child Poverty and Near-Poverty Rates by Race/Ethnicity
	and Parental Employment Status, and Their Changes, 1997-2001 vs.
	1987-1991

			All children			Povert	y rate		Nea	r-poverty	rate
Race/ Ethnicity and parental	Percer distrib	ntage vution	% change	Nurr (in mil	lions)	~	.0	% change	%	. 0	% change
employment status	(1)	(2)	(2)-(1)/(1)*100			(3)	(4)	(4)-(3)/(3)*100	(5)	(9)	(6)-(5)/(5)*100
	1987- 1991	1997- 2001		1987- 1991	1997- 2001	1987- 1991	1997- 2001		1987- 1991	1997- 2001	
White	100%	100%		44.0	44.0	12.0%	9.9%	-17.5%**	19.4%	17.5%	-9.9%**
At least one parent worked full-time, year-round	78.9%	83.4%	5.7%**	34.7	36.7	3.5%	3.4%	-3.5%	17.3%	15.5%	-10.4%**
Parents worked part-time	15.6%	12.7%	-18.3%**	6.9	5.6	32.6%	33.8%	3.7%	30.2%	28.9%	-4.2%
No parent employed	5.6%	3.9%	-29.5%**	2.4	1.7	71.5%	66.4%	-7.1%**	17.9%	19.6%	9.3%
Black	100%	100%		9.2	10.2	44.6%	33.2%	-25.7%**	24.0%	27.1%	12.9%**
At least one parent worked full-time, year-round	49.1%	62.3%	27.1%**	4.5	6.4	11.4%	10.7%	-6.2%	31.6%	30.9%	-2.1%
Parents worked part-time	23.5%	23.6%	0.3%	2.2	2.4	61.8%	61.0%	-1.2%	25.3%	24.1%	-4.9%
No parent employed	27.4%	14.1%	-48.7%**	2.5	1.4	87.5%	80.8%	-7.7%**	9.3%	13.3%	43.5%**
Hispanics	100%	100%		7.0	11.2	38.6%	31.2%	-19.1%**	30.5%	33.5%	9.7%**
At least one parent worked full-time, year-round	58.9%	70.0%	18.9%**	4.1	7.8	17.7%	17.0%	-3.9%	36.3%	37.2%	2.5%
Parents worked part-time	22.8%	19.2%	-16.0%**	1.6	2.1	54.3%	54.3%	-0.1%	30.7%	30.7%	-0.1%
No parent employed	18.3%	10.8%	-40.9%**	1.3	1.2	84.3%	79.4%	-5.9%**	11.5%	15.0%	30.0%**
* p<.10 **p<.05											

It has been documented in previous studies that differences in the living arrangements of black and white children account for a substantial amount of the variation in their economic security (Lichter and Landale,1995; Eggebeen and Lichter,1991). A decomposition of living arrangements by race/ethnicity during 1997-2001 illustrates an up-to-date living arrangement pattern among white and minority children. Thirty-eight percent of black children lived in homes in which both of their parents were present. The corresponding figures were 65 percent for Hispanics and 78 percent for whites. Of those young children not living with both parents, the large majority were living with unmarried mothers. Black children were more likely to live with an unmarried mother—51 percent—than any other group. The corresponding figure among Hispanic children was 26 percent and for non-Hispanic white children, 16 percent. These account in part for the disproportionately high poverty rates of minority children.

	Low-Income rate			
—	9	6	% change	
Race/Ethnicity and parental employment status	(1)	(2)	(2)-(1)/(1)*100	
	1987-1991	1997-2001		
White	31.4%	27.4%	-12.8%**	
At least one parent worked full-time, year round	20.7%	18.8%	-9.2%**	
Parents worked part-time	62.8%	62.7%	-0.1%	
No parent employed	89.4%	86.0%	-3.8%**	
Black	68.7%	60.3%	-12.2%**	
At least one parent worked full-time, year round	43.0%	41.6%	-3.2%	
Parents worked part-time	87.1%	85.1%	-2.3%*	
No parent employed	96.8%	94.1%	-2.8%**	
Hispanic	69.1%	64.7%	-6.4%**	
At least one parent worked full-time, year round	54.0%	54.2%	0.4%	
Parents worked part-time	85.1%	85.0%	-0.1%	
No parent employed	95.8%	94.4%	-1.5%*	

 
 Table 4-2:
 Distribution and Changes in Low-Income Rates by Race and Parental Employment Status, 1997-2001 vs. 1987-1991

\*p<.10, \*\*p<.05

Parental full-time employment rates increased for all racial/ethnic groups (Note 27). The rate of increase in full-time employment was much faster among black and Hispanic parents than it was among white parents and the overall employment gap between minority and white parents declined substantially from 1987-1991 to 1997-2001. The reductions in part-time employment accompanied by the increases in full-time employment for Hispanic and white parents also helped to improve child economic security. There was no important rise or fall in child poverty or near-poverty rates for working families within each racial/ethnic group, except a minor improvement in the low-income rate for black children whose parents worked part time. The greatest reductions in low-income and in near-poverty rates among working families with children by race/ethnicity were among white parents employed full-time. Finally, each racial/ethnic group also showed notable improvements in economic security for children whose parents were not employed (see Tables 4-1 and 4-2).

#### 8. Multivariate analyses

In order to better understand the changing association between parental characteristics and the chances for children to live in low-income families, we further examine differentials by parental and family characteristics over the two time periods, 1987-1991 and 1997-2001 by using a logit model. The non-parametric approach in earlier sections can only control for some but not all of the characteristics examined by this study at the same time. Some observations reported above may reflect compositional effects of other important characteristics that cannot be controlled for simultaneously.

Table 5 shows a multivariate model that predicts the log-odds of children living in low-income families by time period, parental, family, and race/ethnicity characteristics that we discussed above and their interaction effects with the time period dummy. As shown by Table 5, the net effects of variables and their interaction terms with the dummy indicating the 1997-2001 time period are largely consistent with results presented by Tables 1-1 to 4-2 in their relative magnitudes and directions. As we expected, the main effects reported by Table 5 show that children with employed, better-educated, older parents, children in two-parent families, and white children are less likely to live in low-income families.

The more interesting findings of Table 5 are concerning the changes between 1987-1991 and 1997-2001. It is shown by Table 5 that there is a 30 percent (Note 28) net decrease in the odds of children to live in low-income families in 1997-2001. This is an effect due to the combined changes in business cycle and policies in the 1990s. As we proposed in the introduction, this study does not try to distinguish these two possible causes of changes but to focus on differential changes among children by subgroups

defined by parental and familial characteristics. By controlling for other parental characteristics, we find that, as indicated by the interaction terms of time periods and parental employment status, working families have benefited less in the recent decline in the odds of falling under the low-income lines. By including in the model the interaction terms between the time period dummy and various subgroups defined above, we find that, during the 1990s, disadvantaged subgroups also benefited less than the others, and the groups benefited the least are those in medium risk ranks (i.e., children in families with parents between ages 25-29, with parents who only had a high-school diploma, and in father-only families). Finally, Table 5 also shows that, net of other parental characteristics, Hispanic children benefited less in the 1997-2001 period (Note 29). This is not shown by Table 4-2 where we have only controlled for parental employment status and race/ethnicity and not the other parental characteristics that are controlled for in Table 5.

Given the parameters estimated using the model shown in Table 5 (Note 30), working families with multiple disadvantages suffered higher odds of low-income status in 1997-2001 than working families with the same set of disadvantages a decade earlier. As shown in Table 5, children living with a single parent who worked full time but only had a high school diploma ('high school/full time work/single parent''), or children living with a single parent who worked full time but was between ages 25 to 29 (''25-29/full time work/single parent'') experienced higher odds of low-income status during 1997-2001 than such children during 1987-1991(Note 31).

It is not only the increased odds of living in low-income families among children in the "high school/full time work/single parent" and the "25-29/full time work/single parent" types of families, but also the increases in the proportion of children in these types of families that helps explain some of the increases in low-income rates shown in Tables 1-1 to 4-2. For example, the combined proportion of children in the "high school/full time work/single parent" and the "25-29/full time work/single parent" types of families among all children living with parents who worked full time but only had a high school diploma increased from 18 percent during 1987-1991 to 27 percent for 1997-2001. Similarly, for children in families with parents who worked full time and were ages 25 to 29, the combined share of the children in the "high school/full time work/single parent" and the "25-29/full time work/single parent" types of families increased from 1987-1991 to 31 percent during 1997-2001.

However, the increased odds of low-income status among children in the "high school/full time work/single parent" and the "25-29/full time work/single parent" types of families are solely responsible for the increases in the low-income rates over time among children in single-parent working families. This is because the proportion of the "high school/full time work/single parent" and the "25-29/full time work/single parent"

	Coefficient	Standard Error
Period (reference 1987-1991)		
1997-2001	-0.35	0.10 **
Parental Characteristics		
Parental Employment (reference No-work)		
Full-time, Year-round	-2.58	0.06 **
Part-time	-1.10	0.06 **
Full-time, Year-round x 1997-2001	0.21	0.08 **
Part-time x 1997-2001	0.18	0.09 **
Parental Education (reference Some College or More)		
Less than HS	1.87	0.04 **
HS Graduate	0.89	0.02 **
Less than HS x 1997-2001	0.06	0.06
HS Graduate x 1997-2001	0.10	0.03 **
Parental Age (reference > 39)		
<25	0.74	0.06 **
25-29	0.81	0.04 **
30-34	0.64	0.03 **
35-39	0.40	0.03 **
<25 x 1997-2001	-0.03	0.08
25-29 x 1997-2001	0.14	0.05 **
30-34 x 1997-2001	0.03	0.04
35-39 x 1997-2001	0.01	0.04
Living Arrangement (reference Married Two-parent)		
Mother Only	0.69	0.03 **
Father Only	-0.11	0.06
Mother Only x 1997-2001	0.17	0.04 **
Father Only x 1997-2001	0.21	0.08 **
Race and Ethnicity (reference Black)		
White	-0.73	0.04 **
Hispanic	0.11	0.05 **
Other	-0.25	0.06 **
White x 1997-2001	0.06	0.05
Hispanic x 1997-2001	0.13	0.06 **
Other x 1997-2001	0.10	0.08
Constant	1.18	0.07 **
Sample Size=259,990		

# Table 5: Logit Model Predicting the Log-Odds for Children in Low-Income Families.

Note: \*\* indicates P<.05, and the model only included children who lived with a parent.

types of families among these children did not increase. The combined proportion of children in the "high school/full time work/single parent" or the "25-29/full time work/single parent" types of families among children in families with a single father worked full time during 1987-1991 was 46 percent, and it remained the same during 1997-2001. Moreover, the combined proportion of children in the "high school/full time work/single parent" or the "25-29/full time work/single parent" or the "25-29/full time work/single parent" types of families among children in the "high school/full time work/single parent" or the "25-29/full time work/single parent" types of families among children in families with a single mother who worked full time was 51 percent in the 1987-1991 period, and it decreased to 45 percent during 1997-2001.

#### 9. Child economic security beyond the official measure of poverty

Taxes and medical- and work-related expenses substantially reduce real family income for children living in near-poor families. More children and families would be included in the low-income category if family income levels were adjusted to reflect a broader range of taxes, benefits, and work-related expenses, as is done by several of the experimental measures of poverty developed by the Census Bureau (Note 32). Figure 9 shows how including government benefits such as in-kind transfers and the EITC and subtracting federal and state taxes, social security payroll taxes, and work-related (e.g., child care costs) and out-of pocket medical (MOOP) expenses would substantially affect our economic portrait of America's children in low-income families (Note 33).

For extremely poor families and poor families with incomes between 50 and 100 percent of the poverty line, the EITC and in-kind transfers (Note 34) help offset the cost of work-related and medical out-of-pocket expenses. Children in extremely poor families benefit more from in-kind transfers than other children. In turn, children in families between 50 and 100 percent of the poverty line, on average, benefit more from the EITC than other children, while the EITC benefit might not be enough to offset the work related costs. This is consistent with findings of previous studies that compared official and experimental measure of poverty (Iceland et al. 2001; Iceland and Kim 2001).

However, previous studies have not documented how using different measures of poverty lines may produce different estimates of family economic resources for children in near-poor families, i.e. family incomes between 100 and 200 percent of poverty lines. As we can see from Figure 9, children in near-poor families were disadvantaged partly because their families pay more in taxes, MOOP expenses, and work-related expenses (e.g., child care costs), meanwhile receiving less in-kind transfers than poor families. By comparing them to children between 50 and 100 percent of poverty lines, our analyses also show some extra burdens faced by near-poor families with children due to a higher tax and reduced benefit. For children in near-poor

families, the annual net effect of including the taxes and benefits mentioned above can be a reduction in the estimated real income of thousands of dollars per family.

The use of an experimental measure of income has differing effects on various categories of low-income families. The extreme poverty rate based on the experimental measure is slightly lower than the official rate. On the other hand, the poverty rate based on the experimental measure is very slightly higher than the official poverty rate. These are consistent with findings of previous studies (Short et al. 1999; Iceland et al. 2001). However, again, previous studies have not documented the differences in low-income rates based on different measures. It is shown by Figure 10 that the near-poverty rate is substantially higher—as much as 10 percentage points—when the experimental measure is used. Poverty rates based on the experimental measure like the official poverty rates decreased during the 1990s. Nevertheless, when the experimental measure is used, nearly half of all children were in low-income families in 2000 (see Figure 10).



Figure 9: Components Contributing to the Differences between Family Income Defined by the Official and Experimental Measures of Poverty in 2000, by Income-to-needs Ratio Groups Defined by the Official Measure of Poverty



Rate (%)

*Figure 10:* Comparison of Low-Income, Poverty, and Extreme-Poverty Rates for Children, Official vs. Experimental Measure of Poverty 1990-2000.

#### 10. Conclusion and discussion (Note 35)

This paper provides a portrait of the nearly 40 percent of children who live in lowincome families in the United States. The number of children in low-income families (those in families with incomes below 200 percent of the poverty line) declined from a high of 31 million in 1993 to 27 million in 2000. While there was a notable reduction in the number of children in low-income families during the period of sustained economic growth from 1993 to 2000 the number of children in low-income families was still about the same in 2000 as in 1990. The low-income rate in 2001 was a little lower than in 1990. The changes in economic conditions for children in low-income families become clearer when we compare changes in child poverty and near-poverty rates over time. The child poverty rate improved more quickly than the near-poverty rate (the percentage of children with family incomes between 100 and 200 percent of the poverty line) during the 1993-2000 period. This indicates that children living in low-income families in the late 1990s might have more family economic resources than children in low-income families of a decade earlier.

Several parental and family characteristics such as low parental education, young parental age, single parenthood, and minority status are key risk factors for child poverty. During 1997-2001, most children whose parents did not have any college education were in low-income families compared to about 23 percent of children whose parents had at least some college education. By 2001, about half of all children without a parent age 35 or older lived in low-income families. Seventy percent of children who lived with an unmarried-mother and about half the children who lived with an unmarried father were low income during the same period, compared to a 27 percent low-income rate for children in two-parent families. Minority children were over two times more likely to live in low-income families than non-minority children in 2001. However, the low-income rate among white children was as high as 27 percent in 1997-2001. As a result, the majority of children in low-income families are white, and most of the children in near-poor families (51 percent) are also white.

The changes in low-income rates by parental or family characteristics during the 1990s are mostly encouraging. While many social groups had similar child low-income rates at the beginning and end of the 1990s, children of unmarried-mother, two-parent families, and children with parents younger than age 25 or older than age 40 all had much lower low-income rates. Child low-income rates improved significantly across all racial/ethnic groups during the 1990s but the reduction for Hispanic children (from 31 percent to 27 percent, a 6 percent reduction) was only about a half of that experienced by non-Hispanic black or white children. An exception to these gains by many social groups was an increase in the likelihood of living in a low-income family during the 1990s for children whose more educated parent had only a high school degree.

The decrease in the overall low-income rate for children in the 1990s is associated with an increase in full-time and year-round employment for parents. During 1997-2001, 85 percent of children in low-income families live with working parents. The increase in the proportion of children in families with a parent employed full-time year-round between 1987-1991 and 1997-2001 occurred for all social groups explored in this paper. The greatest increases in parental employment were for families with high risk factors, such as those without any parent who graduated from high school, those without any parent older than age 24, unmarried-mother families, and minority families. As parental employment increased for these high risk families, the proportion of children who relied solely on public assistance (with no parental earnings) among all

children in low-income families fell to as low as 4 percent in 2001, less than a third of its 1993 level of 15 percent.

While the increase in parental employment after 1993 helped to reduce child lowincome rates, the increased parental employment and reduced welfare receipt have not been accompanied by significant improvement in economic security for children in working families. By holding the risk factors (parental age, parental education, living arrangement, and race/ethnicity) constant, parental full-time employment appeared to do less to protect economically vulnerable families during 1997-2001 than it did a decade earlier. In other words, the low-income rate did not improve for working families during the 1990s, but it did improve overall because more families became employed. The groups that suffered the most in reduced economic security given parental employment status during the 1990s were those in medium risk rankschildren in families with parents between ages 25 to 29, with parents who only had a high-school diploma, and in father-only families. Multivariate results in section 8 show that the increased odds of falling below low-income lines among children facing multiple disadvantaged characteristics and the increased proportion of children facing multiple disadvantaged characteristics help explain the largest increase in economic hardships among children in the medium ranks listed above.

The increase in parental employment among children in low-income families during the 1990s was accompanied by a weakened safety net for families without earnings. As a result, the proportion of children living in low-income families that was from families without income from earnings or from public assistance nearly doubled during the 1990s.

This paper also compares the estimates of low-income, poverty, and extreme poverty rates between 1990 and 2000 based on the official definition of poverty with those based on an experimental measure of poverty and family income developed by the U.S. Census Bureau. Our results show that the estimates for low-income rates based on the official definition of poverty are conservative. The low-income rate based on the experimental measure of poverty was as high as 50 percent in the late 1990s. By decomposing the sources that cause the gap between the official and experimental measures of poverty, our analyses also show that near-poor families (i.e., those with incomes between 100 to 200 percent of the poverty line) with children are facing extra burdens that are caused by relatively fewer public benefits and higher taxes and work related costs.

While this study helps document characteristics of children in low-income families in the U.S. and their recent changes, the results of this study need to be further explored by future research in order to better understand the determinants of these documented changes. One possible explanation for the great decline in the protective effect of parental employment with respect to child economic well-being in the United States is that recent welfare policy changes pushed parents with low wage rates into the labor market, and the consequent increase in the labor supply due to policy changes affected most strongly children in the medium risk ranks listed above. It is also possible that the trends described in this article were purely the result of temporary market demand changes. More information on labor market and policy changes is required to distinguish the impacts of policy changes, the business cycle, or other secular changes that might have contributed to the decline in the child low-income rate, and the weakening protective effect of parental employment.

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### Notes

- 1. The new studies described below have indirectly addressed some of the concerns for whether defining poverty by consumption level can lower the rate of economic insecurity of recent years, while measuring poverty by family consumption or by family income is still an on-going debate (Cf., Boushey et al. 2001; Johnson, Rogers, and Tan, 2001; Lichter 1997; Mayer 1997; Lino 1996; Slesnick 1993). For definition of poverty thresholds in 2003. please the see http://www.census.gov/hhes/poverty/threshld/thresh03.html.
- 2. Recently, policy researchers, e.g., Acs et al. (2000), have begun to use 200 percent of the official poverty line to track low-income families, in line with the extended Medicaid eligibility threshold in many states.
- 3. Aber et al. (1997) has an overview of the impact of poverty on child health. Blau (1999) emphasizes the importance of permanent income on child development. Mayer (1997) documented the limitation of income effects on child development and pointed out the importance of parenting. However, Hanson et al. (1997) showed evidence for the limitation of parenting effects and the net impact of family economic resources. For an up-to-date conceptual framework on the impact of economic resources on child development and potential policy strategies to reduce this impact, see Gershoff, Aber, and Raver (2003), Duncan and Brooks-Gunn (2000), and Moore and Redd (2002).
- 4. In some instances this paper also examines "extremely poor" children, defined as those in families with incomes below 50 percent of the poverty line.
- 5. While the Earned Income Tax Credit (EITC) helps working families under poverty, the benefit phases out quickly for near-poverty working families. See our analyses below on "Child economic security beyond the official measure of poverty." Robert Cherry and Max Sawicky (2000) argued that tax policies of the kind enacted in 2001 leave families with incomes between \$21,000 and \$29,000 with an "implicit marginal tax rate (MTR)" as high as 43 percent.
- 6. For an overview of studies evaluating the impacts of PRWORA, please see Blank (2003), Blank (2002), Blank and Haskins (2001), Moffitt and Ploeg (2001), Lichter and Jayakody (2002), and Weil and Finegold., eds. (2002). For studies on the impact of the EITC, please see Meyer and Rosenbaum (2000), Ellwood (2000), and the other articles in the same special issue of the *National Tax Journal*, 53(4, part 2). Please see Bennett and Lu (2001) for how state EITCs help to lift children out of poverty, and Johnson (2001) for a broader discussion about the costs and benefits of implementing state EITCs. Dubay and Kenney (2002) provides a

simple overview of SCHIP and covers many studies done by the Urban Institute on SCHIP related issues. An up-to-date discussion of the SCHIP enrollment can also be found in Riley et al. (2002), and Smith and Rousseau (2002). Two studies, Dick et al. (2002), and Shenkman et al. (2002) document the relationship of state policy and SCHIP enrollment patterns. Mitchell and Osber (2002) provide one successful example of how SCHIP can be used to help working families. For evaluating impacts of welfare reform on child economic well-being, please see Lichter and Crowley (forthcoming), Blank and Schoeni (2003), Bennett, Lu, and Song (2002).

- 7. Please see Citro and Michael (1995), and Short et al. (1999). For the most up-todate definition of the experimental poverty measures, please see Proctor and Dalaker (2003, 2002). However, because the Census Bureau has not made a final decision about which new measure of poverty to use and due to the varying data requirements associated with each possible new measure, it is very difficult to compare changes in near-poverty rates over time using the Census Bureau's most up-to-date measure used by Proctor and Dalaker (2003). The version available for public use when we prepared this paper only allows us to estimate trends between 1990 and 2000.
- 8. Since the income sources used to define low-income status referred to the calendar year before the interview time, the trends in levels and differentials of low-income children and their families referred to in the paper have a one-year lag to the survey years.
- 9. The number of households interviewed was recently increased to approximately 78,000. The 2001 data used in this paper are based on this new expanded sample. Please see Proctor and Dalaker (2002) Appendix B, for more details.
- 10. Please see http://www.census.gov/hhes/www/poverty.html for more details.
- 11. The family income estimates used in this paper include pre-tax income from the following sources: earnings, unemployment compensation, workers' compensation, social security, supplemental security income (SSI), public assistance, veterans' payments, survivor benefits, disability benefits, pension or retirement benefits, interest, dividends, rents, royalties, and estates and trusts, educational assistance, alimony, child support, financial assistance from outside of the household, and other sources. Please see http://www.census.gov/population/www/cps/cpsdef.html for more details on how the March CPS defines pre-tax income. Please see http://www.census.gov/hhes/poverty/threshld.html for the official definition of child poverty thresholds,

- 12. Please see Short et al. (1999), Short (2001), Dalaker (2001), and our analyses below. The SAS codes used in this paper to produce the experimental measure of poverty are kindly provided by Kathleen Short of the Census Bureau but the authors of this paper are solely responsible for the findings. By using publicly available CPS data, we cannot reproduce the estimates posted by the Census Bureau because, for the sake of confidentiality, some sensitive information has been suppressed. However, the differences in our estimates are unlikely to affect our main conclusions. Another source of differences between our estimates and those of the Census Bureau is that we add an estimated state EITC that was not included by the Census Bureau. It should also be noted that the experimental measure of poverty can change the composition of the poverty population, and a future research should explore the extend of compositional difference can be.
- 13. By choosing 1987-1991 and 1997-2001, we can compare periods immediately prior to and after major policy changes in the 1990s. The federal EITC was expanded significantly in 1993, and state waivers to federal welfare laws were implemented as early as 1992. The Temporary Assistance for Needy Families (TANF) was implemented nationally in 1996. Please see Bennett, Lu, and Song (2002), for details on state waivers and TANF implementation dates. The year of 2001 is also in one way similar to 1991 in that both were near a point in time when child poverty rate started to increase after a period of improvement (see Figure 2).
- 14. A couple of years after the implementation of TANF ( the 1996 welfare law), the Children's Defense Fund warned policy makers and researchers to pay attention to an unexpected rise in extreme poverty due to the decline in welfare caseloads between 1995 and 1997. Figure 4 shows that the extreme poverty rate among low-income children reached its recent peak (21 percent) in 1997, and has generally declined since 1998. From 2000 to 2001, however, the extreme poverty rate rose again. Time will reveal whether there will be a new, long-term increase in extreme poverty among low-income children or a cyclical fluctuation. Please see Sherman et al. (1998). Cf. Lichter and Eggebeen (1993).
- 15. NCCP (1996) has documented that the child poverty rate has worsened relative to the poverty rate of people older than age 65 since the 1980s. These trends have been called the "Juvenilization of poverty." Cf. Lichter (1997), and Bianchi (1999). For a contrast between child poverty rates and the rates for people older than age 65 from 1975 to 2001, see Lu (2003b) (http://www.nccp.org/media/cpf03-text.pdf). We do not repeat that analysis here.
- 16. See Lu (2003a) for a more detailed discussion of changes in child low-income, poverty, and extreme poverty rates from 2000 to 2001 by race/ethnicity groups.

- 17. Analyses referring to parental characteristics (such as, parental employment status, age, education, marital status) were all based on children who live with their parent(s).
- 18. Earnings include wages, salary, self-employment, and farm income. There could be negative earnings defined above but in the current context we only count those with positive earnings. For sources of income other than earnings and public assistance, please see endnote 11.
- 19. Public assistance includes SSI and welfare income.
- 20. It is worth a further study to find out how much children in families without earnings and public assistance for the whole year were in fact relying on economic resources not uncovered by the CPS data. However, it is very unlikely the dramatic increases started in the 1990s were solely a result of data quality changes. Cf. Zedelewski et al. (2003).
- 21. Low-income rates in the first row of each panel (e.g., Less than HS, HS graduate, etc.) are not conditioned by parental employment status, while those in the third to fourth rows of each panel are. Low-income rates in the first row of columns (1) and (2), therefore, are weighted averages of those estimates conditioned by parental employment status, and the weights are based on the proportion of parents in each employment status of the referred time period reported in Table 1-1. As a result, the first row of columns (1) and (2) in each panel is always between the highest and lowest values of each column of the same panel. However, this may not be true for the last column, since the changes shown by that column can be purely driven by the changes in the composition of parental employment, or the probability of living in low-income families of each parental employment status, or both. When the changes are driven by the composition of parental employment, the "% changes" not conditioned by parental employment (shown by the first row of the last column in each panel) can have an opposite direction to the ones that are conditioned (shown by the other rows of the last column). One good example is the panel for children whose parents are "Less than HS." In a future study, a formal decomposition of changes in the low-income rate vs. changes in the composition of various family characteristics may be useful to describe the differential changes in a more detailed fashion (Cf. Romo 2003).
- 22. The percentage changes by using estimates presented in Tables 1-1 to 4-2 may be subjected to rounding errors.

- 23. Another way to conceptualize the importance of parental age is the life-cycle stages. The young adulthood years tend to have a higher probability of experiencing poverty. See Rank and Hirschl (2001).
- 24. Teenage parents are identified by the age difference between children and their older parent in the family. This excludes teen parents no longer living with children at the time of their CPS interview or married to an older spouse before their child's first birthday. These biases may result in an underestimation of the association of teen birth and current poverty. For more details on the debate about whether it is unwed status or early childbearing that causes child poverty see Wu and Wolfe, eds., (2001), Foster (1998), Luker (1996), Bonars and Grogger (1994), and Geronimus and Korenman (1992).
- 25. Lerman (2002) provides one of the most recent reviews on how living arrangement can affect the economic well-being of children. Iceland (2003b) and Lichter and Crowley (forthcoming), however, found that changes in family structures contributed much less to changes in child poverty in the 1990s than in earlier years.
- 26. The estimates for race/ethnicity are based on samples that represent all children no matter whether they live with their parents or not, while in our other analyses with parental characteristics include only those live with their parent(s), step/foster parent(s).
- 27. Due to sample size limitations, Tables 4-1 and 4-2 does not distinguish among children of various Hispanic origins, such as Cubans and Puerto Ricans.
- 28. Exp(-.035)=.70.
- 29. The reference group of Table 5 is black children. However, this result is not affected by whether we use black or white children as the reference group.
- 30. Models including three-way interaction terms among the time dummy, parental employment status, and subgroups have also been examined, but none of those models fits better than the one presented by Table 5.
- 31. For children in working families with multiple disadvantages, i.e., the "high school/full time work/single parent" and the "25-29/full time work/single parent" families, the estimated linear combination of the coefficients and standard errors that reflect the increases in the odds to live in low-income families from the 1987-1991 to the 1997-2001 period are the following: For children living with a single mother who worked full time but only had a high school diploma, the combined coefficient (=-.35+.21+.10+.17) is .13 (or a 14 percent —i.e. exp[.13]=.14—increase), and its standard error is .06. For children living with a single father who

worked full time but only had a high school diploma, the combined coefficient is .17 (or a 19 percent increase), and its standard error is .09. For children living with a single mother who worked full time and was between ages 25 and 29, the combined coefficient is .17 (or a 19 percent increase), and its standard error is .07. For children living with a single father who worked full time and was between ages 25 and 29, the combined coefficient is .21 (or a 23 percent increase), and its standard error is .10. If children face more disadvantaged characteristics, the increase in the odds to live in low-income families may increase more. For example, the estimated increase can be as high as 36 percent for children living with a single father who only have a high school diploma, worked full time, and was between ages 25 and 29, and the increase was 31 percent, for children living with a single mother with similar characteristics.

- 32. The experimental measure of poverty was based on a version developed by the Census Bureau. This version is only available for years between 1990 and 2000—See Dalaker (2001). There is a newer version of the experimental measure of poverty—See Proctor and Dalaker (2003, 2002)—but it is not yet available for public use and the comparable measure for years before 1997 has not yet been developed. In order to compare changes during the 1990s, we decided to use the one measure applicable to all years between 1990 and 2000.
- 33. Several experimental poverty measures that have been examined by the Census Bureau include the above-mentioned elements. The measurement used by this paper is based on the measurement proposed by the National Academy of Sciences—See Short (2001), Short et al. (1999), and Citro and Michael (1995). Studies by the Census Bureau show the differences based on various experimental measurements of poverty are minor, and the measure proposed by the National Academy of Sciences produces child poverty rates in the middle range of all experimental measurements of poverty—Cf., Dalaker (2001), and Short et al. (2002).
- 34. In-kind transfers include food stamps, subsidized school lunches, and home energy assistance programs. Work-related expenses include but are not limited to child care costs. For a description of how the Census Bureau estimated work-related expenses (e.g., child care costs) and MOOP expenses using the strategy recommended by the National Academy of Sciences, please see Short et al. (2002) and Short (2001).
- 35. See Lu et al. (2003) for differentials and changes in child economic hardship in the 1990s by immigration status and state of residence and for policy implications that are not fully discussed by this article.

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## Appendix A. Definition of Variables and Subgroups

Variables	Subgroups
Parental Employment	Three employment statuses are defined by the parent who maintained the highest level of employment in the previous year: Full-time year-round (working at least 35 hours per week for at least 50 weeks in the previous year), part-time (any work less than the level defined above), and no work.
Parental Age	Four age groups are defined by the age of the oldest parent residing in the household: <25, 25-29,30-34, 35-39, and 40 or older
Parental Education	Three educational levels are defined by the most educated parent living in the household: Less than high school, high school graduate only, and some college education or more.
Living Arrangement	Three living arrangements are defined: Married two-parent families (with two biological/adoptive parents or step parents), unmarried-mother families, and unmarried-father families.
Race and Ethnicity	Three major race and ethnicity groups are defined: Hispanic (regardless of race), non-Hispanic white, and non-Hispanic black